

AMENDMENTS TO THE CLAIMS

Claims 1-31 were filed originally and were pending at the time of the Action.

Claims 7, 8, 17, 18, 21, and 29 are amended.

Claims 1-31 remain pending.

1. (Original) A method for performing resource discovery in a network having multiple subnets and wherein inter-subnet discovery agents installed on nodes within the multiple subnets support inter-subnet resource discovery, the method comprising:

designating, within a first subnet, a first inter-subnet discovery agent on a first node as an active discovery agent;

discovering, by the first inter-subnet discovery agent, active discovery agents on neighboring subnets in the network; and

propagating, by the first node containing the active discovery agent, an inter-subnet resource discovery search request to the active discovery agents on neighboring subnets.

2. (Original) The method of claim 1 wherein the resource discovery search request is a network device discovery request.

3. (Original) The method of claim 2 wherein the network device discovery request is a request to identify printers in the network.

1           4.     (Original)   The method of claim 1 wherein the discovering step  
2 includes:

3           receiving, by the first node containing the first active discovery agent,  
4 from a second node containing an active discovery agent on a neighboring  
5 subnet, information comprising a network address of the second node containing  
6 the active discovery agent; and

7           storing, by the first node, the information in a list identifying neighboring  
8 active discovery agents.

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10          5.     (Original)   The method of claim 4 further comprising the steps  
11 of:

12          receiving, by the first node containing the active discovery agent, a  
13 request to provide discovery information for a discoverable resource and in  
14 response performing, during the propagating step, the sub-steps of:

15                passing the request to the active discovery agent on the first node;

16                searching, by the active discovery agent on the first node, the list  
17 of neighboring active discovery agents; and

18                issuing, by the first node, a search request identifying a resource  
19 discovery requester to at least one neighboring active discovery agent in  
20 the list identifying neighboring active discovery agents.

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22          6.     (Original)   The method of claim 5 further comprising the step of:  
23 transmitting, by the first node containing the active discovery agent, to the  
24 resource discovery requester a response including resource discovery  
25 information corresponding to the discoverable resource.

1           7.     (Presently amended)     The method of claim 4 further  
2 comprising:

3           publishing, by at least one ~~the~~ node, address information for neighboring  
4 active discovery agents into a network directory service.

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6           8.     (Presently amended)     The method of claim 1 wherein at least  
7 one ~~the~~ node comprises a set of device discovery agents, further comprising the  
8 step of:

9           determining, by the set of device discovery agents, discovery information  
10 for discoverable resources present on the subnet.

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12           9.     (Original)     The method of claim 1 wherein the designating step  
13 comprises:

14           automatically selecting, as the active discovery agent, the first inter-  
15 subnet discovery agent from a set of installed discovery agents in the first subnet  
16 according to a criterion.

17  
18           10.    (Original)     The method of claim 1 wherein the designating step  
19 comprises:

20           manually selecting, as the active discovery agent, the first inter-subnet  
21 discovery agent from a set of installed discovery agents in the first subnet.

1 11. (Original) A computer-readable medium having computer-  
2 executable instructions for facilitating performing resource discovery in a  
3 network having multiple subnets and wherein inter-subnet discovery agents  
4 installed on nodes within the multiple subnets support inter-subnet resource  
5 discovery, the computer-readable medium having computer-executable  
6 instructions facilitating performing the steps of:

7 designating, within a first subnet, a first inter-subnet discovery agent on a  
8 first node as an active discovery agent;

9 discovering, by the first inter-subnet discovery agent, active discovery  
10 agents on neighboring subnets in the network; and

11 propagating, by the first node containing the active discovery agent, an  
12 inter-subnet resource discovery search request to the active discovery agents on  
13 neighboring subnets.

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15 12. (Original) The computer-readable medium of claim 11 wherein  
16 the resource discovery search request is a network device discovery request.

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18 13. (Original) The computer-readable medium of claim 12 wherein  
19 the network device discovery request is a request to identify printers in the  
20 network.  
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1           14. (Original) The computer-readable medium of claim 11 wherein  
2 the discovering step includes:

3           receiving, by the first node containing the first active discovery agent,  
4 from a second node containing an active discovery agent on a neighboring subnet,  
5 information comprising a network address of the second node containing the active  
6 discovery agent; and

7           storing, by the first node, the information in a list identifying neighboring  
8 active discovery agents.

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10          15. (Original) The computer-readable medium of claim 14 further  
11 comprising the steps of:

12           receiving, by the first node containing the active discovery agent, a  
13 request to provide discovery information for a discoverable resource and in  
14 response performing, during the propagating step, the sub-steps of:

15                passing the request to the active discovery agent on the first node;

16                searching, by the active discovery agent on the first node, the list of  
17 neighboring active discovery agents; and

18                issuing, by the first node, a search request identifying a resource  
19 discovery requester to at least one neighboring active discovery agent in  
20 the list identifying neighboring active discovery agents.

1           16. (Original) The computer-readable medium of claim 15 further  
2 comprising the step of:

3           transmitting, by the first node containing the active discovery agent, to the  
4 resource discovery requester a response including resource discovery information  
5 corresponding to the discoverable resource.

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7           17. (Presently amended) The computer-readable medium of  
8 claim 14 further comprising:

9           publishing, by at least one ~~the~~ node, address information for  
10 neighboring active discovery agents into a network directory service.

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12           18. (Presently amended) The computer-readable medium of claim  
13 11 wherein at least one ~~the~~ node comprises a set of device discovery agents,  
14 further comprising the step of:

15           determining, by the set of device discovery agents, discovery information  
16 for discoverable resources present on the subnet.

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18           19. (Original) The computer-readable medium of claim 11 wherein  
19 the designating step comprises:

20           automatically selecting, as the active discovery agent, the first inter-  
21 subnet discovery agent from a set of installed discovery agents in the first  
22 subnet according to a criterion.

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1           20. (Original) The computer-readable medium of claim 11 wherein  
2 the designating step comprises:

3           manually selecting, as the active discovery agent, the first inter-subnet  
4 discovery agent from a set of installed discovery agents in the first subnet.

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6           21. (Presently amended) A resource discovery framework for  
7 resource discovery embodied in a computer-readable medium in a network  
8 including multiple subnets and discoverable networked resources, the  
9 framework comprising:

10           an active discovery agent designated for ones of the multiple subnets for  
11 identifying active discovery agents on neighboring subnets within the network;

12           a selection mechanism for designating the active discovery agent within  
13 each

14 subnet; and

15           a request propagation mechanism by which nodes containing the active  
16 discovery agents propagate an inter-subnet resource discovery search request to  
17 active discovery agents on neighboring subnets.

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19           22. (Original) The resource discovery framework of claim 21  
20 wherein a list is maintained by each active discovery agent identifying the active  
21 discovery agent for neighboring subnets.

1           23. (Original) The resource discovery framework of claim 22,  
2 further including:

3           a directory service in communication with the active discovery agents in  
4 the network, the directory service including information corresponding to the lists  
5 maintained by the active agents.

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7           24. (Original) A system for automating network-wide resource  
8 discovery in networks having multiple subnets:

9           a set of inter-subnet discovery agents installed on nodes within the  
10 multiple subnets support inter-subnet resource discovery; and

11           a first inter-subnet discovery agent on a first node designated as an active  
12 discovery agent, the first inter-subnet discovery agent including procedures for  
13 facilitating:

14           discovering active discovery agents on neighboring subnets in the network;  
15 and

16           propagating an inter-subnet resource discovery search request to the  
17 active discovery agents on neighboring subnets.

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19           25. (Original) The system of claim 24 wherein the resource  
20 discovery search request is a network device discovery request.

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22           26. (Original) The system of claim 25 wherein the network device  
23 discovery request is a request to identify printers in the network.

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1           27. (Original) The system of claim 24 wherein the procedure for  
2 discovering active discovery agents facilitates:

3           receiving, by the first node containing the first active discovery agent,  
4 from a second node containing an active discovery agent on a neighboring subnet,  
5 information comprising a network address of the second node containing the  
6 active discovery agent; and

7           storing, by the first node, the information in a list identifying neighboring  
8 active discovery agents.

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10           28. (Original) The system of claim 27 wherein the first inter-subnet  
11 discovery agent includes procedures that facilitate, in response to receiving a  
12 request to provide discovery information for a discoverable resource, generating  
13 a response by:

14           searching the list of neighboring active discovery agents; and

15           issuing a search request identifying a resource discovery requester  
16 to at least one neighboring active discovery agent in the list identifying  
17 neighboring active discovery agents.

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19           29. (Presently amended) The system of claim 28 ~~29~~ wherein the  
20 first inter-subnet discovery agent includes procedures that facilitate:

21           transmitting, by the first node, to the resource discovery requester a  
22 response including resource discovery information corresponding to the  
23 discoverable resource.  
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1       30. (Original) The system of claim 27 wherein the first node  
2 further comprises procedures facilitating publishing address information for  
3 neighboring active discovery agents, obtained by the first inter-subnet discovery  
4 agent, into a network directory service.

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6       31. (Original) The system of claim 24 wherein the first node  
7 comprises a set of device discovery agents for determining discovery  
8 information for discoverable resources present on the subnet.  
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